



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/768,945	01/30/2004	Ralph Louis Chappell	Serie 6375	7169
21897	7590	07/12/2007		
THE MATTHEWS FIRM 2000 BERING DRIVE SUITE 700 HOUSTON, TX 77057			EXAMINER GILBERT, WILLIAM V	
			ART UNIT 3635	PAPER NUMBER
			MAIL DATE 07/12/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/768,945

Applicant(s)

CHAPPELL ET AL.

Examiner

William V. Gilbert

Art Unit

3635

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 May 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5, 7-12, 15-19, 21-47, 50-52, 54, 55, 58 and 60-71 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5, 7-12, 15-19, 21-47, 50-52, 54, 55, 58 and 60-71 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input checked="" type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Art Unit: 3635

DETAILED ACTION

This is a Final Office Action. Applicant cancelled Claims 6, 13, 14, 20, 48, 49, 53, 56 and 57. Applicant never presented a Claim 59. Claims 1-5, 7-12, 15-19, 21-47, 50-52, 54, 55, 58 and 60-71 are pending below.

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 65 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 65 recites the limitation "the second cryogenic delivery equipment" in line 3. There is insufficient antecedent basis for this limitation in the claim.

Art Unit: 3635

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 1-4, 7, 9-12, 15-19, 21-23, 25-36, 38-42, 44-47, 50-52, 54, 55, 58, 60-71 are rejected under 35 U.S.C. 103(a) as being unpatentable over Haseotes (U.S. Patent No. 5,881,527) in view of Bowen (U.S. Patent No. 6,047,747).

Claims 1 and 15: Haseotes discloses a method of using and a portable precast slab (Fig. 1: 10) by providing a reinforced

Art Unit: 3635

precise slab (10: Abstract, line 1) that has a top surface, a plurality of side surfaces (14) and a lower surface, the slab is made of concrete (Title), and placing the slab on the ground.

Haseotes does not disclose the particular dimensions as claimed.

It would have been obvious at the time the invention was made to a person having ordinary skill in the art as a matter of design choice to have these dimensions because one of ordinary skill in the art would make a portable slab these dimensions so as to increase the portability of the slab to not exceed the dimensions of a road that would be used in transportation.

Further Haseotes does not disclose leveling the slab. It would have been obvious at the time the invention was made to a person having ordinary skill in the art to level the slab in order to insure the structure used in conjunction with the slab would be properly stabilized. Lastly, Haseotes does not disclose the particulars of using a cryogenic tank with the slab. Bowen discloses a piece of cryogenic delivery equipment (Col. 11: lines 10-25) that comprises a bulk storage tank (Col 11, line 12) a source of cryogen (line 11, the tanker) which would fill the bulk tank and would be connected to the tank and later be disconnected when complete, and part of the cryogenic delivery equipment would not be disposed on the top surface of the slab (the top of the tank would not be on the top surface of the

Art Unit: 3635

slab, yet the bottom surface would. It would have been obvious at the time the invention was made to a person having ordinary skill in the art to use the portable slab in Haseotes in conjunction with the cryogenic tank because it is well known that cryogenic tanks are placed on concrete slabs (Remarks, arguments page 18, *Overview of Cryogenic Delivery Installation*) and the slab in Haseotes is fully capable of being used as a foundation for the cryogenic tank.

Claim 2: the slab has reinforcing means (Abstract: line 1) cast into it.

Claim 3: the slab has means for attachment (Fig. 1: 20 accessible from the top surface).

Claims 4, 16: the means is anchor bolts (Fig. 5: 25).

Claim 7: while the prior art of record does not specifically disclose mechanically attaching the cryogenic tank to the slab, it would have been obvious at the time the invention was made to a person having ordinary skill in the art to mechanically attach structures to foundations in order to stabilize and properly anchor the structure.

Claim 9: the slabs are formed of multiple pieces (Fig. 7) placed adjacent to each other.

Claims 10, 11 and 21: while the slab may be used as a splash pad, Haseotes in view of Bowen does not provide the

Art Unit: 3635

dimensions of the slab as claimed. It would have been obvious at the time the invention was made to a person having ordinary skill in the art to use these dimensions because one of ordinary skill in the art would want to dimension a portable slab to be transferred on a road. The phrase "available for liquid oxygen" lines 3, 4 is a statement of intended use of the claimed invention and must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim.

Claim 12: While Haseotes in view of Bowen discloses a pump in conjunction with the cryogenic system (Col. 10, lines 9-15), it does not disclose the pump in fluid conjunction with the tank. It would have been obvious at the time the invention was made to a person having ordinary skill in the art to use the pump in conjunction with the tank because it is well known to use pumps in conjunction with cryogenic materials in order to store the material and transfer the material.

Claim 17: a plurality of apertures (20) is visible from the top surface that can be used to install fence posts.

Art Unit: 3635

Claim 18: the slab has at least one side surface (Fig. 7) that is shaped to interconnect with at least one side surface of another slab.

Claim 19: the slab has a plurality of reinforcement cast into the concrete, but not in the pattern as claimed. It would have been obvious at the time the invention was made to a person having ordinary skill in the art to place the reinforcement into the slab because it is well known in the art to place reinforcement in a criss-cross fashion.

Claim 22: the rebar is in a support frame (10) and the means for attachment is removably attached.

Claim 23 and 33: Haseotes discloses providing a form (Col. 4, lines 16-19), casting the form with concrete, placing means for attachment (20) into the mixture, but Haseotes does not disclose allowing the concrete to cure (which one would do prior to transportation), the form would be removed, the slab would be placed on the ground prior to placing a structure on it, or transporting the slab to a location. It would have been obvious at the time the invention was made to a person having ordinary skill in the art to allow the concrete to cure and remove the forms because one would not move wet concrete and transport a portable slab via a delivery vehicle because one of ordinary skill in the art would make and transport a portable slab as

Art Unit: 3635

claimed, and one would place the slab on the ground because this is well known in the art. Further, Haseotes does not disclose using the cryogenic equipment in conjunction with the slab as claimed. Bowen discloses a piece of cryogenic delivery equipment (Col. 11: lines 10-25) that comprises a bulk storage tank (Col 11, line 12), a source of cryogen (line 11, the tanker) which would fill the bulk tank and would be connected to the tank and later be disconnected when complete. It would have been obvious at the time the invention was made to a person having ordinary skill in the art to use the portable slab in Haseotes in conjunction with the cryogenic tank because it is well known that cryogenic tanks are placed on concrete slabs (Remarks, arguments page 18, *Overview of Cryogenic Delivery Installation*) and the slab in Haseotes is fully capable of being used as a foundation for the cryogenic tank. Further, it would have been obvious at the time the invention was made to a person having ordinary skill in the art to transport the equipment system to a location via a vehicle because these types of storage systems are made at a factory and transported instead of being made at the final destination.

Claim 25: the slab is made of more than one piece (Fig. 7) and the pieces are capable of interfacing to form the slab.

Claim 26: reinforcement is cast into the slab (Abstract).

Art Unit: 3635

Claim 27: the slab has a plurality of reinforcement cast into the concrete, but not in the pattern as claimed. It would have been obvious at the time the invention was made to a person having ordinary skill in the art to place the reinforcement into the slab because it is well known in the art to place reinforcement in a criss-cross fashion.

Claim 28: the reinforcing means would form a three-dimensional support structure.

Claim 29: the rods are prestressed (Col. 17, line 5).

Claim 30: Haseotes does not disclose curing the slab prior to use, but it would have been obvious at the time the invention was made to a person having ordinary skill in the art to let the slab cure because one would not transport a wet slab since it would not set properly.

Claim 31: the concrete would be a different density at different locations of the slab (the density of the slab would be different at locations where reinforcement is located than where it would not be located).

Claim 32: Haseotes discloses the claimed invention including a furrow (Fig. 1: 15), but it does not disclose a plurality of furrows. It would have been obvious at the time the invention was made to a person having ordinary skill in the art to have numerous furrows, since it has been held that mere

Art Unit: 3635

duplication of the essential working parts of a device involves only routine skill in the art. *St. Regis Paper Co. v. Bemis Co.*, 193 USPQ 8.

Claim 34: the slab has reinforcing in the concrete (Abstract).

Claim 35: the slab has means for attachment (Fig. 1: 20 accessible from the top surface.

Claim 36: the means is anchor bolts (Fig. 5: 25).

Claim 38: the slabs are formed of multiple pieces (Fig. 7) placed adjacent to each other.

Claims 39 and 50: Haseotes discloses a portable concrete slab with reinforcement, but Haseotes does not disclose the steps of transporting the slab or leveling the slab. It would have been obvious at the time the invention was made to a person having ordinary skill in the art to transport a portable slab via a delivery vehicle because one of ordinary skill in the art would transport a portable slab via a delivery vehicle.

Further, leveling the slab is in the ordinary skill in the art because one would level a slab so that the structure placed on it would be stable. Further, Haseotes does not disclose using the cryogenic equipment in conjunction with the slab as claimed.

Bowen discloses a piece of cryogenic delivery equipment (Col. 11: lines 10-25) that comprises a bulk storage tank (Col 11,

Art Unit: 3635

line 12), a source of cryogen (line 11, the tanker) which would fill the bulk tank and would be connected to the tank and later be disconnected when complete, and the equipment is coupled to a facility (Col. 11, lines 15-17). It would have been obvious at the time the invention was made to a person having ordinary skill in the art to use the portable slab in Haseotes in conjunction with the cryogenic tank because it is well known that cryogenic tanks are placed on concrete slabs (Remarks, arguments page 18, *Overview of Cryogenic Delivery Installation*) and the slab in Haseotes is fully capable of being used as a foundation for the cryogenic tank. Further, it would have been obvious at the time the invention was made to a person having ordinary skill in the art to transport the equipment system to a location via a vehicle because these types of storage systems are made at a factory and transported instead of being made at the final destination. Lastly, Haseotes in view of Bowen does not disclose entering in a leasing agreement for the slab or a supply agreement for a cryogen. It would have been obvious at the time the invention was made to a person having ordinary skill in the art to enter in these agreements because leasing agreements are well known in order to decrease one's overall cost and when only temporary possession of an item is desired, and supply agreements are well known in the art because a place

Art Unit: 3635

that uses cryogen many times does not produce its own cryogen and has to contract with an outside source to supply the cryogen.

Claim 40: the slab has means for attachment (Fig. 1: 20 accessible from the top surface.

Claim 41: the means is anchor bolts (Fig. 5: 25).

Claim 42: while the prior art of record does not specifically disclose mechanically attaching the cryogenic tank to the slab, it would have been obvious at the time the invention was made to a person having ordinary skill in the art to mechanically attach structures to foundations in order to stabilize and properly anchor the structure.

Claim 44: a portion of the slab can be used as a splash pad.

Claims 45, 46 and 47: while Haseotes discloses a concrete pad, it does not disclose the particular dimensions as claimed. It would have been obvious at the time the invention was made to a person having ordinary skill in the art as a matter of design choice to have these dimensions because the pad in Haseotes can be made to any dimension.

Claim 51: Haseotes in view of Bowen disclose a vaporizer in combination with the cryogenic container (Bowen: Col. 11, lines 20-22).

Art Unit: 3635

Claim 52: while the prior art of record does not specifically disclose mechanically attaching the cryogenic tank to the slab, it would have been obvious at the time the invention was made to a person having ordinary skill in the art to mechanically attach structures to foundations in order to stabilize and properly anchor the structure.

Claims 54 and 55: while the prior art of record does not specifically disclose placing a slab onto a delivery vehicle and transporting the slab to a job site in response to the customer order and the slab preexists the customer order, it would have been obvious at the time the invention was made to a person having ordinary skill in the art to transport the slab and to have these steps with the slab in Haseotes in view of Bowen because the slab in Haseotes is portable and one of ordinary skill in the art would transport the slab in such a fashion. Further one of ordinary skill in the art would place the slab on a truck in response to a customer order and have the slab preexist the customer order because that is routine in business.

Claim 58: the support surface is part of a permanent structure housing the facility (Bowen: Col. 11, lines 15-17).

Claim 60: the prior art of record does not disclose using a crane to lift the slab. It would have been obvious at the time the invention was made to a person having ordinary skill in the

Art Unit: 3635

art to use a crane to lift the slab because it is well known to use a crane to move such heavy objects and cranes are best suited to move a concrete slab.

Claim 61: the slab has lift members (Haseotes: 20). It would be inherent to couple a lifting apparatus to the lift members because that is their intended use.

Claim 62: the slab is secured with retaining members (Fig. 14a: 25).

Claim 63: Haseotes in view of Bowen does not disclose the method steps as claimed. It would have been obvious at the time the invention was made to a person having ordinary skill in the art to perform these method steps because the slab in Haseotes is intended to be portable and one of ordinary skill in the art would use these steps in the process of transporting the slab.

Claim 64: Haseotes in view of Bowen does not disclose the method steps as claimed. It would have been obvious at the time the invention was made to a person having ordinary skill in the art to use the method steps because the slab in Haseotes is portable and one of ordinary skill in the art would transport the slab as needed and one of ordinary skill in the art would use different cryogenic tanks coupled to facilities in order to fulfill the different needs of the user.

Art Unit: 3635

Claim 65: while Haseotes in view of Bowen does not disclose the method limitation as claimed, it would have been obvious at the time the invention was made to a person having ordinary skill in the art to remove the equipment to lighten the load and reduce the risk of damage to the equipment.

Claim 66: Haseotes in view of Bowen discloses coupling the tank to a facility configured to consume the cryogen (Bowen: Col. 11, lines 15-20).

Claim 67, 68, 70 and 71: part of the tank would not be on the top surface (i.e. the top of the tank would not be disposed on the top surface while the bottom of the tank could be).

Claim 69: the top surface of the slab can be used as a splash pad to catch liquid cryogen.

Claims 5 and 37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Haseotes in view of Bowen and Gaudelli (U.S. Patent No. 4,660,344).

Claims 5 and 37: while Haseotes discloses a portable slab, it does not disclose using a cable to move the slab. Gaudelli discloses using a cable (Fig. 10: F, and portions attached to F) to move a slab. It would have been obvious at the time the invention was made to a person having ordinary skill in the art

Art Unit: 3635

to move the slab with a cable because the use of cables to move structures is well known in the art.

Claims 8, 24 and 43 are rejected under 35 U.S.C. 103(a) as being unpatentable over Haseotes in view of Bowen and Paquette (U.S. Patent No. 5,720,135).

Claims 8, 24 and 43: Haseotes in view of Bowen discloses apertures in the top surface of the slab (Haseotes: 20), but the prior art of record does not particularly disclose placing a fence around the perimeter of the slab. Paquette discloses installing fence posts and fencing (196) around a perimeter of a structure (Fig. 1: generally). It would have been obvious at the time the invention was made to a person having ordinary skill in the art to place a fence around the structure in Haseotes in view of Bowen because fences are well known in the art for securing a perimeter.

Response to Arguments

3. The following is in response to Remarks/Arguments filed by the Applicant 25 April 2007.

Regarding the objection to Claim 20: Applicant's cancellation of Claim 20 renders the objection moot.

Art Unit: 3635

Applicant's arguments, see page 16, filed 25 April 2007, with respect to the 35 U.S.C. §112 rejections of Claims 1, 8, 19, 23, 27, 30, 39, 43 and 58 have been fully considered and are persuasive. The rejection of the claims has been withdrawn.

Applicant's arguments, see 16, filed 25 April 2007, with respect to the Double Patenting rejection have been fully considered and are persuasive. The Double Patenting rejection has been withdrawn.

Applicant's arguments with respect the Claims have been considered but are moot in view of the new ground(s) of rejection as Claims are amended by the Applicant. See below, however for response to arguments.

Applicant argues the difference of a permanent slab for use with a cryogenic tank versus a portable slab and that the use of a portable slab in conjunction with a cryogenic storage is not obvious to one of ordinary skill in the art. The Examiner disagrees. The fact that a slab is portable is well known in the art of building structures, and slabs serve the purpose of acting as a foundation for numerous structures, including cryogenic tanks.

Art Unit: 3635

Regarding the argument to the Gaudelli reference (page 21), this art is used to show that concrete slabs may be lifted using cables.

Regarding the argument to the Hartman reference (page 21), this is used to show that it is well known in the art to affix industrial equipment to a slab; however, Hartman was not used in this action.

Regarding the argument to the Paquette reference (page 21), the reference was used to establish that it is well known in the art to use fencing to secure a perimeter, regardless of what is contained within the perimeter.

Conclusion

4. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action

Art. Unit: 3635

is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to William V. Gilbert whose telephone number is 571.272.9055. The examiner can normally be reached on Monday - Friday, 08:00 to 17:00 EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Chilcot can be reached on 571.272.6777. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 3635

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

WVG

WVG
06 July 07

Robert Canfield
Primary Examiner

